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THE COST OF CLEAN WATER. VOLUME IV. STATE AND MAJOR RIVER BASIN MUNICIPAL TABLES

Federal Water Pollution Control Administration
Washington, D. C.

10 January 1968

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The Cost of Clean Water

U.S. DEPARTMENT OF THE INTERIOR
Federal Water Pollution Control Administration

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VOLUME IV

STATE AND MAJOR RIVER BASIN
SUMMARY TABLES

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Volume IV — State and Major River Basin Municipal Tables

THE COST OF

CLEAN WATER

Volume IV

State and Major River Basin

Municipal Tables

U. S. Department of the Interior
Federal Water Pollution Control Administration
January 10, 1968

PREFACE

The Federal Water Pollution Control Act (Section 16(a)) directs the Secretary of the Interior to conduct a comprehensive analysis of the national requirements for, and the cost of, treating municipal, industrial, and other wastewater effluents to attain water quality standards established under the Act. This first analysis is required to be submitted to the Congress by January 10, 1968, to cover Fiscal Years 1969-1973, inclusive, and to be updated each year thereafter.

This is Volume IV of the report (State and Major River Basin Municipal Tables) containing a tabular breakdown of estimated construction costs of municipal treatment works and sanitary sewers, and the operation and maintenance costs of treatment works. The data are shown for each of the 50 States and District of Columbia and the Nation's major river basins as described by the Water Resources Council.

A summary (Volume I) of the major findings and conclusions was transmitted to the Congress on January 10, 1968. Further information to support these findings and conclusions is contained in Volume II (Detailed Analyses) and Volume III (Industrial Waste Profiles) comprising ten studies of major water-using industries which describe the cost and effectiveness of alternative methods of reducing industrial wastes.

The purpose of Volume IV is to make available for easy reference statistical data on construction requirements and costs by State and Water Resources Region. Breakdowns of the capital outlay components - for upgrading of facilities, for construction of new facilities for untreated wastes, for increases in population and for depreciation replacement - are also shown geographically for the five-year period, 1969-1973. Volume IV also gives similar geographical compilations of the operation and maintenance costs that would be associated with such a construction schedule. Finally, there is a summary for States and Regions of the need for sanitary sewers with estimates of the requirements and costs of sewering presently unsewered urban populations and constructing sewers for increases in the urban population.

Although it was not possible to arrive at a completely definitive estimate of required costs, it is believed that this study provides not only a more comprehensive cost estimate than has previously been developed but also a sound base of information upon which to build future cost projections. The arrangement of the data in this Volume will facilitate comparisons with other estimates, particularly those that may be developed at the State level and thereby lead to improved cost estimating with each annual updating.

Joe D. Moore, Jr.

Commissioner
Federal Water Pollution Control Administration

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TABLE OF CONTENTS

	Page		Page
Introduction	1		
U. S. and State Tables			
United States, Total	5	Mississippi	18
Alabama	5	Missouri	18
Alaska	6	Montana	19
Arizona	7	Nebraska	19
Arkansas	7	Nevada	20
California	8	New Hampshire	20
Colorado	8	New Jersey	21
Connecticut	9	New Mexico	21
Delaware	9	New York	22
District of Columbia	10	North Carolina	22
Florida	10	North Dakota	23
Georgia	11	Ohio	23
Hawaii	11	Oklahoma	24
Idaho	12	Oregon	24
Illinois	12	Pennsylvania	25
Indiana	13	Rhode Island	25
Iowa	13	South Carolina	26
Kansas	14	South Dakota	26
Kentucky	14	Tennessee	27
Louisiana	15	Texas	27
Maine	15	Utah	28
Maryland	16	Vermont	28
Massachusetts	16	Virginia	29
Michigan	17	Washington	29
Minnesota	17	West Virginia	30
		Wisconsin	30
		Wyoming	31
Water Resources Region Tables			
Alaska	33	North Atlantic	38
Arkansas-White-Red	33	Ohio	38
California	34	Rio Grande	39
Columbia-North Pacific	34	Souris-Red-Rainy	39
Great Basin	35	South Atlantic-Gulf	40
Great Lakes	35	Tennessee	40
Hawaii	36	Texas-Gulf	41
Lower Colorado	36	Upper Colorado	41
Lower Mississippi	37	Upper Mississippi	42
Missouri	37		

Appendix I

Estimated Increases in Urban Population, 1973-1978, Used to Calculate Excess Capacity 43

LIST OF FIGURES

FIGURES	TITLE	Page
I-1	Capital Outlays Needed for Waste Treatment Works Construction	4
I-2	Water Resources Regions Proposed by Water Resources Council for Type 1 Comprehensive Surveys	32

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INTRODUCTION

Requirements For Municipal Waste Treatment Facilities

Estimates of the requirements for municipal waste treatment facilities by State and Water Resources Regions were developed from the 1962 Inventory of Municipal Waste Treatment Facilities which was updated to January 1, 1967.[1] This updated Inventory is the most recent compilation of existing municipal treatment facilities in the U. S. It served, therefore, as the source of determining the population served by adequate and less than adequate treatment facilities. It also made it possible to estimate the magnitude of the population discharging untreated wastes through comparing the difference in the total population served by treatment facilities with the total urban population, State by State. These two requirements [upgrading existing inadequate facilities and constructing facilities for untreated wastes] comprise the current unmet need. In addition to the need for increased capacity of existing facilities, there are further requirements resulting from population growth and the need to replace depreciated plant and equipment.

In summary, this analysis is composed of four major waste treatment requirements - upgrading existing facilities where needed to attain water quality standards, construction of facilities for urban populations discharging untreated wastes, construction of facilities for increases in urban populations, and replacement of depreciated plant and equipment.

Attainment of Standards By 1973

As a basis for this National cost analysis, this study has assumed that municipal waste treatment requirements to achieve water quality standards will be funded at a level to accomplish the goal by the end of FY 1973. This is consistent with implementation plans of most state standards approved or in process of approval.

Adequate Waste Treatment

To estimate the costs of carrying out waste treatment requirements embodied in standards still being negotiated, it was necessary to assume a given level of treatment as generally representative of that contained in the stand-

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[1] *Glass, Andrew C. and Kenneth H. Jenkins, 1962 Inventory Municipal Waste Facilities in the United States, Division of Water Supply and Pollution Control, U. S. Department of Health, Education and Welfare, Public Health Service.*

ards. It was assumed that a conventional secondary treatment level (at least 85% effective removal of five-day biochemical oxygen demand for domestic sewage) would prevail for treating municipal wastes with some exceptions as described in table footnotes. This conforms with the policy reflected in the Federal Water Pollution Control Administration's "Guidelines for Establishing WATER QUALITY STANDARDS for Interstate Waters" issued in May 1966.

Urban Population Used As Measure of Need

Urban population is believed to be a sound basis for measuring total need for secondary waste treatment facilities, particularly for national estimates. Using urban population as the basis of need for some States may possibly neglect some pressing rural waste treatment requirements. This could occur particularly in States with a relatively low percentage of urbanized population, such as Vermont. Therefore, costs estimated by this study for less urbanized States may not be high enough to provide waste treatment works necessary for attaining water quality standards. Future annual updates should evaluate such deficiencies and adjustments will be made in the estimates.[2]

Eligible Costs

Estimates of construction costs are based on total costs eligible for Federal grant assistance. These are costs incurred in new sewage treatment works construction or additions, extensions, alterations, acquisitions, and improvements to, by, or of existing treatment works; costs for necessary intercepting sewers, outfall sewers, pumping, power, and other equipment; costs for preliminary planning and such other actions necessary to sewage treatment construction such as engineering, legal and fiscal investigations, studies and designs, including the supervision and inspection of construction.

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[2] *The Bureau of the Census defines urbanized areas in part as, "..... incorporated places with 2,500 inhabitants or more, incorporated places with less than 2,500 inhabitants, provided each has a closely settled area of 100 dwelling units or more, wincorporated territory with a population density of 1,000 inhabitants or more per square mile.....". See U. S. Bureau of the Census, U. S. Census of Population: 1960, United States Summary, Number of Inhabitants, PC (1), p. XIX.*

Operation and Maintenance Costs

Operation and maintenance costs are based upon the actual costs directly associated with plant operation and maintenance, excluding costs for central administration, billing and collection of sewer charges, and expenditures for capital maintenance according to Federal construction grant records. The types of costs included are salaries and wages, electricity, chemicals and other supplies. The data for these costs were obtained from approximately 1,000 individual plants and were correlated with population served.

Separate Sanitary Sewers

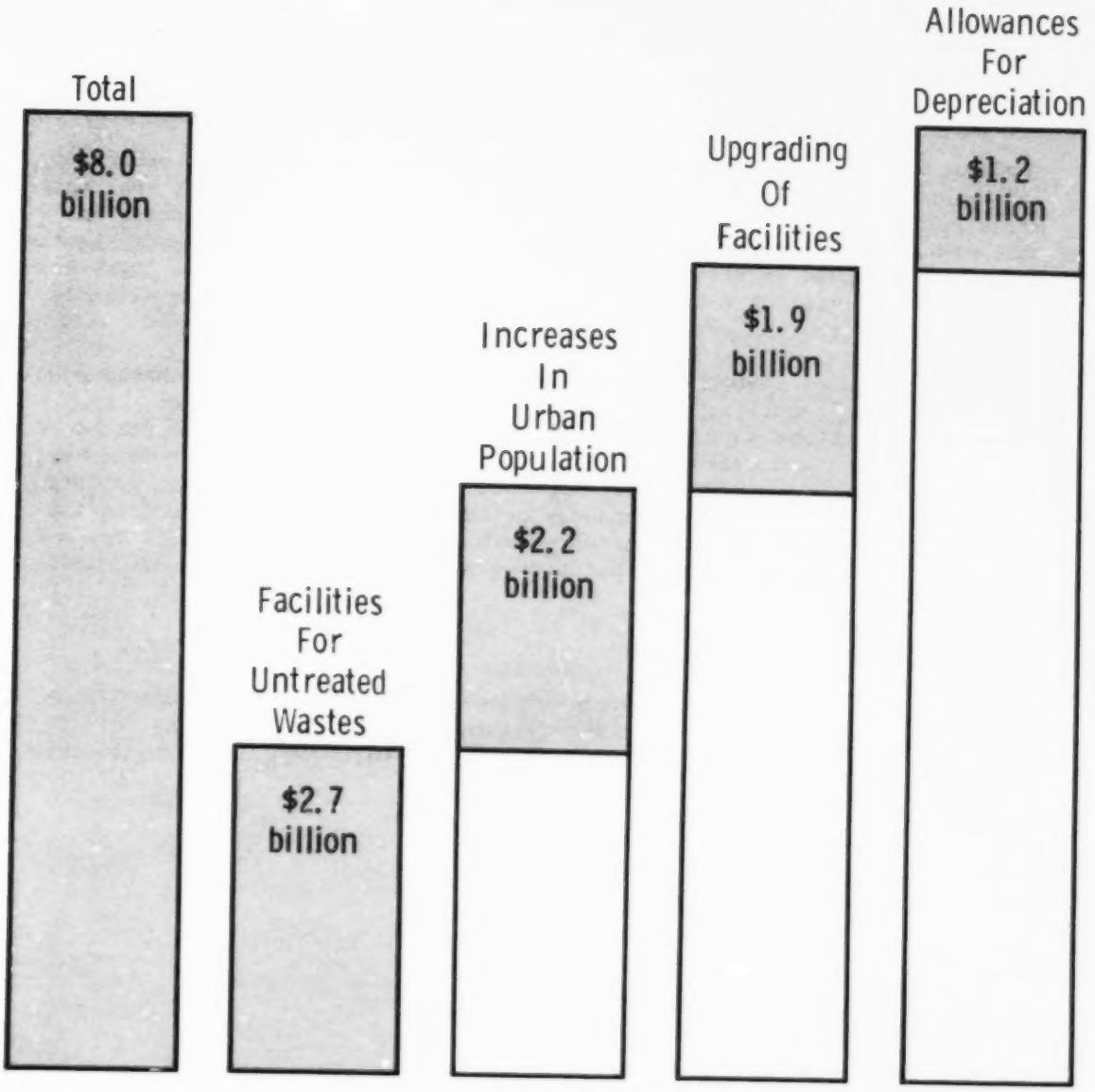
The cost of providing separate sanitary sewers for the unsewered urban population and the cost of sewering increases in urban population has been estimated by this study for the period 1969-1973 in order to relate these requirements to waste treatment works requirements. Interceptor sewer requirements are included as part of waste treatment works needs because these sewers are an integral part of waste treatment systems and therefore eligible for FWPCA construction grants.

This study assumes that the national need for sanitary sewers is based upon the total urban population in each State and Water Resource Region. The cost of constructing sanitary sewers varies widely throughout the United States. In 1963 the sewering of unsewered areas served by public water systems was estimated by FWPCA at $125 per capita. This cost figure, adjusted for interim construction cost changes by States, was used to calculate the total costs for sewering the unsewered urban population for each State, and for sewering projected urban population growth during the period 1969-1973.

Costs Expressed in 1968 Dollars

The total costs by State and Water Resources Region are expressed in "constant" 1968 dollars. Constant 1968 dollars were obtained by using July 1967, the beginning of FY 1968, as the base and adjusting all costs to this base by use of appropriate indexes.

FIGURE I-1
CAPITAL OUTLAYS NEEDED FOR WASTE TREATMENT WORKS CONSTRUCTION
1969-1973



POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Total United States	
	1968	1969-1973
Summary of Need for Municipal Treatment Works:		
Urban population of area (thousands)	145,602[3]	
With adequate treatment	81,703	
Less than adequate treatment	31,865	
No treatment	32,293	
Projected needs, total (population, thousands)	81,078	
Upgrading of treatment	31,865	
Constructing facilities for untreated wastes	32,293	
Increases in urban population	16,920	
Investment and capital outlays needed (mil. dol.)		
Investment, total	5,714.8	
Adequate treatment	4,148.2	
Less than adequate treatment	1,566.6	
Capital outlays needed, total (mil. dol.)		7,994.0
Upgrading less than adequate facilities		1,868.7
Constructing facilities for untreated wastes		2,707.4
Increases, population and industry[4]		2,182.5
Allowances for depreciation		1,235.4
Summary of Treatment Works Operation and Maintenance Costs:		
Operation and maintenance costs, total (mil. dol.)[5]	201.5	1,390.0
For adequate treatment facilities	140.6	1,219.0
For less than adequate facilities	60.9	171.0
For projected needs, total		495.0
Upgraded facilities		238.8
New facilities for untreated wastes		234.8
New facilities for population increases		21.4
Summary of Need for Sanitary Sewers:		
Urban population, total (thousands)	145,602[3]	
Sewered	118,220	
Unsewered	28,440	
Projected needs, total (population, thousands)		45,400
Sewering unsewered urban population		28,440
Increases in urban population		16,960
Capital outlays needed, total (mil. dol.)		6,160.5
Sewering unsewered urban population		3,867.0
Increases in urban population		2,293.5

See footnotes at end of tables.

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Alabama		Alaska[1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,140		121	
With adequate treatment	819		19	
Less than adequate treatment	678			
No treatment	643		102	
Projected needs, total (population, thousands)		1,675		133
Upgrading of treatment		678		
Constructing facilities for untreated wastes		643		102
Increases in urban population		354		31
Investment and capital outlays needed (mil. dol.)				
Investment, total	73.4		1.0	
Adequate treatment	47.9		1.0	
Less than adequate treatment	25.5			
Capital outlays needed, total (mil. dol.)		131.0		12.8
Upgrading less than adequate facilities		33.0		
Constructing facilities for untreated wastes		39.0		7.0
Increases, population and industry[2]		42.0		5.0
Allowances for depreciation		17.0		0.8
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[3]	3.1	22.2	1.8	9.5
For adequate treatment facilities	2.0	19.4	1.7	9.2
For less than adequate facilities	1.1	2.8	0.1	0.3
For projected needs, total		9.4		0.7
Upgraded facilities		4.4		0.7
New facilities for untreated wastes		4.5		
New facilities for population increases		0.5		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,140		121	
Sewered	1,650		103	
Unsewered	490		18	
Projected needs, total (population, thousands)		845		50
Sewering unsewered urban population		490		20
Increases in urban population		355		30
Capital outlays needed, total (mil. dol.)		65.0		8.0
Sewering unsewered urban population		37.5		3.0
Increases in urban population		27.5		5.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Arizona		Arkansas	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	1,411		937	
With adequate treatment	711		684	
Less than adequate treatment	34		156	
No treatment	666		97	
Projected needs, total (population, thousands)		1,109		417
Upgrading of treatment		34		156
Constructing facilities for untreated wastes		666		97
Increases in urban population		409		164
Investment and capital outlays needed (mil. dol.)				
Investment, total	47.5		47.7	
Adequate treatment	44.1		37.9	
Less than adequate treatment	3.4		9.8	
Capital outlays needed, total (mil. dol.)		84.0		45.5
Upgrading less than adequate facilities		4.0		12.0
Constructing facilities for untreated wastes		25.5		4.5
Increases, population and industry[4]		44.0		20.0
Allowances for depreciation		10.5		9.0
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	0.8	8.6	1.7	8.8
For adequate treatment facilities	0.7	8.3	1.1	7.3
For less than adequate facilities	0.1	0.3	0.6	1.5
For projected needs, total		4.8		1.8
Upgraded facilities		0.3		1.0
New facilities for untreated wastes		4.0		0.6
New facilities for population increases		0.5		0.2
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	1,411		937	
Sewered	777		876	
Unsewered	634		61	
Projected needs, total (population, thousands)		1,050		225
Sewering unsewered urban population		640		60
Increases in urban population		410		165
Capital outlays needed, total (mil. dol.)		133.5		24.5
Sewering unsewered urban population		81.5		6.5
Increases in urban population		52.0		18.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	California [1]		Colorado	
	1968	1969–1973	1968	1969–1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	17,651		1,602	
With adequate treatment	12,766		854	
Less than adequate treatment	36		593	
No treatment	4,849		155	
Projected needs, total (population, thousands)		7,951		1,022
Upgrading of treatment		36		593
Constructing facilities for untreated wastes		4,849		155
Increases in urban population		3,066		274
Investment and capital outlays needed (mil. dol.)				
Investment, total	605.6		58.5	
Adequate treatment	603.7		39.1	
Less than adequate treatment	1.9		19.4	
Capital outlays needed, total (mil. dol.)		645.2		97.6
Upgrading less than adequate facilities		2.0		26.0
Constructing facilities for untreated wastes		370.5		18.0
Increases, population and industry [4]		150.5		40.5
Allowances for depreciation		122.2		13.1
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.) [4]	11.2	99.5	2.5	16.3
For adequate treatment facilities	6.1	80.2	1.9	14.8
For less than adequate facilities	5.1	19.3	0.6	1.5
For projected needs, total		49.7		5.3
Upgraded facilities		27.3		3.5
New facilities for untreated wastes		18.4		1.5
New facilities for population increases		4.0		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	17,651		1,602	
Sewered	12,833		1,467	
Unsewered	4,818		135	
Projected needs, total (population, thousands)		7,885		410
Sewering unsewered urban population		4,820		35
Increases in urban population		3,065		275
Capital outlays needed, total (mil. dol.)		1,174.5		52.0
Sewering unsewered urban population		718.0		17.0
Increases in urban population		456.5		35.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Connecticut		Delaware	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,342		356	
With adequate treatment	312		9	
Less than adequate treatment	1,286		267	
No treatment	744		80	
Projected needs, total (population, thousands)		2,255		393
Upgrading of treatment		1,286		267
Constructing facilities for untreated wastes		744		80
Increases in urban population		225		46
Investment and capital outlays needed (mil. dol.)				
Investment, total	74.4		11.2	
Adequate treatment	21.4		1.2	
Less than adequate treatment	53.0		10.0	
Capital outlays needed, total (mil. dol.)		175.8		30.1
Upgrading less than adequate facilities		69.5		13.0
Constructing facilities for untreated wastes		50.0		4.5
Increases, population and industry[4]		36.5		9.5
Allowances for depreciation		19.8		3.1
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)	3.2	25.1	0.5	3.5
For adequate treatment facilities	1.0	19.6		2.2
For less than adequate facilities	2.2	5.5	0.5	1.3
For projected needs, total		14.6		2.2
Upgraded facilities		9.3		1.7
New facilities for untreated wastes		5.0		0.5
New facilities for population increases		0.3		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,342		356	
Sewered	1,640		276	
Unsewered	702		80	
Projected needs, total (population, thousands)		925		140
Sewering unsewered urban population		700		80
Increases in urban population		225		60
Capital outlays needed, total (mil. dol.)		125.0		19.5
Sewering unsewered urban population		94.5		11.5
Increases in urban population		30.5		8.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	District of Columbia[2]		Florida[1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	832		4,860	
With adequate treatment	832		1,741	
Less than adequate treatment			864	
No treatment			2,255	
Projected needs, total (population, thousands)		70		4,117
Upgrading of treatment				864
Constructing facilities for untreated wastes				2,255
Increases in urban population		70		998
Investment and capital outlays needed (mil. dol.)				
Investment, total	69.6		154.4	
Adequate treatment	69.6		117.5	
Less than adequate treatment			36.9	
Capital outlays needed, total (mil. dol.)		21.4		347.0
Upgrading less than adequate facilities				46.0
Constructing facilities for untreated wastes				191.5
Increases, population and industry[4]		8.0		68.0
Allowances for depreciation		13.4		41.5
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	3.3	27.8	6.1	52.5
For adequate treatment facilities	3.3	27.8	4.3	48.0
For less than adequate facilities			1.8	4.5
For projected needs, total		0.3		26.5
Upgraded facilities				6.0
New facilities for untreated wastes				19.0
New facilities for population increases		0.3		1.5
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	832		4,860	
Sewered	832		2,687	
Unsewered			2,173	
Projected needs, total (population, thousands)		70		3,175
Sewering unsewered urban population				2,175
Increases in urban population		70		1,000
Capital outlays needed, total (mil. dol.)		53.5		368.5
Sewering unsewered urban population				252.5
Increases in urban population		53.5		116.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Georgia		Hawaii[1]	
	1968	1969–1973	1968	1969–1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,727		591	
With adequate treatment	1,081		162	
Less than adequate treatment	1,003			
No treatment	643		429	
Projected needs, total (population, thousands)		2,123		503
Upgrading of treatment		1,003		
Constructing facilities for untreated wastes		643		429
Increases in urban population		477		74
Investment and capital outlays needed (mil. dol.)				
Investment, total	113.5		9.6	
Adequate treatment	72.1		9.6	
Less than adequate treatment	41.4			
Capital outlays needed, total (mil. dol.)		209.6		35.5
Upgrading less than adequate facilities		53.5		
Constructing facilities for untreated wastes		60.5		27.5
Increases, population and industry[4]		69.0		4.5
Allowances for depreciation		26.6		3.5
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	3.6	26.7	0.5	4.6
For adequate treatment facilities	1.9	22.4	0.3	3.6
For less than adequate facilities	1.7	4.3	0.2	1.0
For projected needs, total		12.9		1.9
Upgraded facilities		6.7		
New facilities for untreated wastes		5.6		1.9
New facilities for population increases		0.6		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,727		591	
Sewered	2,308		166	
Unsewered	419		425	
Projected needs, total (population, thousands)		895		500
Sewering unsewered urban population		420		425
Increases in urban population		475		75
Capital outlays needed, total (mil. dol.)		104.0		73.0
Sewering unsewered urban population		48.5		62.0
Increases in urban population		55.5		11.0

296-587 O - 68 - 3

Summary of Requirements and Outlays	Idaho		Illinois	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	349		8,923	
With adequate treatment	160		7,410	
Less than adequate treatment	134		586	
No treatment	55		927	
Projected needs, total (population, thousands)		225		2,225
Upgrading of treatment		134		586
Constructing facilities for untreated wastes		55		927
Increases in urban population		36		712
Investment and capital outlays needed (mil. dol.)				
Investment, total	15.6		446.2	
Adequate treatment	7.2		408.1	
Less than adequate treatment	8.4		38.1	
		23.0		367.0
Upgrading less than adequate facilities		10.5		48.0
Constructing facilities for untreated wastes		2.5		102.0
Increases, population and industry[4]		6.5		136.0
Allowances for depreciation		3.5		81.0
Summary of Treatment Works Operation and Maintenance Costs:				
	1.1	5.6	16.5	91.4
For adequate treatment facilities	0.6	4.3	15.1	87.9
For less than adequate facilities	0.5	1.3	1.4	3.5
For projected needs, total		1.3		12.4
Upgraded facilities		1.0		2.9
New facilities for untreated wastes		0.3		8.5
New facilities for population increases				1.0
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	349		8,923	
Sewered	312		8,015	
Unsewered	37		908	
Projected needs, total (population, thousands)		70		1,620
Sewering unsewered urban population		35		910
Increases in urban population		35		710
		9.0		210.5
Sewering unsewered urban population		4.5		118.0
Increases in urban population		4.5		92.5

Summary of Requirements and Outlays	Indiana		Iowa[1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	3,182		1,526[3]	
With adequate treatment	2,286		1,590	
Less than adequate treatment	529			
No treatment	367			
Projected needs, total (population, thousands)		1,144		101
Upgrading of treatment		529		
Constructing facilities for untreated wastes		367		
Increases in urban population		248		101
Investment and capital outlays needed (mil. dol.)				
Investment, total	163.8		113.9	
Adequate treatment	133.9		97.1	
Less than adequate treatment	29.9		16.8	
		162.1		34.7
Upgrading less than adequate facilities		39.5		
Constructing facilities for untreated wastes		45.5		
Increases, population and industry[4]		45.0		15.5
Allowances for depreciation		32.1		19.2
Summary of Treatment Works Operation and Maintenance Costs:				
	7.1	40.8	4.2	21.0
For adequate treatment facilities	6.1	38.3	3.3	16.5
For less than adequate facilities	1.0	2.5	0.9	4.5
For projected needs, total		7.8		
Upgraded facilities		4.0		
New facilities for untreated wastes		3.5		
New facilities for population increases		0.3		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	3,182		1,526[6]	
Sewered	2,915		1,631	
Unsewered	267			
Projected needs, total (population, thousands)		515		100
Sewering unsewered urban population		265		
Increases in urban population		250		100
		67.0		12.5
Sewering unsewered urban population		34.5		
Increases in urban population		32.5		12.5

Summary of Requirements and Outlays	Kansas[1]		Kentucky	
	1968	1969–1973	1968	1969–1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	1,475		1,539	
With adequate treatment	1,267		536	
Less than adequate treatment	192		792	
No treatment	16		211	
Projected needs, total (population, thousands)		370		1,195
Upgrading of treatment		192		792
Constructing facilities for untreated wastes		16		211
Increases in urban population		162		192
Investment and capital outlays needed (mil. dol.)				
Investment, total	69.3		74.2	
Adequate treatment	56.9		44.6	
Less than adequate treatment	12.4		29.6	
[illegible]		49.6		120.8
Upgrading less than adequate facilities		14.5		39.0
Constructing facilities for untreated wastes		0.5		24.5
Increases, population and industry[4]		22.5		40.5
Allowances for depreciation		12.1		16.8
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	3.4	17.6	3.1	20.0
For adequate treatment facilities	2.9	16.3	2.0	17.2
For less than adequate facilities	0.5	1.3	1.1	2.8
For projected needs, total		1.8		7.2
Upgraded facilities		1.6		5.0
New facilities for untreated wastes				1.9
New facilities for population increases		0.2		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	1,4756		1,539	
Sewered	1,592		1,343	
Unsewered			196	
Projected needs, total (population, thousands)		160		385
Sewering unsewered urban population				195
Increases in urban population		160		190
[illegible]		20.5		48.5
Sewering unsewered urban population				24.5
Increases in urban population		20.5		24.0

[redacted]

Summary of Requirements and Outlays	Louisiana		Maine	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,479		509	
With adequate treatment	818		37	
Less than adequate treatment	515		60	
No treatment	1,146		412	
Projected needs, total (population, thousands)		2,045		485
Upgrading of treatment		515		60
Constructing facilities for untreated wastes		1,146		412
Increases in urban population		384		13
Investment and capital outlays needed (mil. dol.)				
Investment, total	61.2		6.8	
Adequate treatment	45.6		2.0	
Less than adequate treatment	15.6		4.8	
[redacted]		182.1		43.9
Upgrading less than adequate facilities		21.0		6.0
Constructing facilities for untreated wastes		80.5		31.5
Increases, population and industry[4]		63.0		3.0
Allowances for depreciation		17.6		3.4
Summary of Treatment Works Operation and Maintenance Costs:				
[redacted]	2.8	24.7	0.4	4.9
For adequate treatment facilities	2.2	23.2	0.1	4.1
For less than adequate facilities	0.6	1.5	0.3	0.8
For projected needs, total		12.2		3.6
Upgraded facilities		3.1		0.5
New facilities for untreated wastes		8.5		3.1
New facilities for population increases		0.6		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,479		509	
Sewered	1,719		493	
Unsewered	760		16	
Projected needs, total (population, thousands)		1,145		30
Sewering unsewered urban population		760		15
Increases in urban population		385		15
[redacted]		143.0		4.0
Sewering unsewered urban population		95.0		2.0
Increases in urban population		48.0		2.0

Summary of Requirements and Outlays	Maryland		Massachusetts [1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works				
Urban population of area (thousands)	2,785		4,563	
With adequate treatment	2,119		1,729	
Less than adequate treatment	162		1,173	
No treatment	504		1,661	
Projected needs, total (population, thousands)		1,039		3,034
Upgrading of treatment		162		1,173
Constructing facilities for untreated wastes		504		1,661
Increases in urban population		373		200
Investment and capital outlays needed (mil. dol.)				
Investment, total	76.8		164.2	
Adequate treatment	68.0		40.0	
Less than adequate treatment	8.8		124.2	
[illegible]		128.4		186.3
Upgrading less than adequate facilities		11.0		64.0
Constructing facilities for untreated wastes		45.5		78.5
Increases, population and industry [4]		53.0		10.0
Allowances for depreciation		18.9		33.8
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	2.7	18.1	2.8	30.4
For adequate treatment facilities	2.2	16.8	1.1	24.2
For less than adequate facilities	0.5	1.3	1.7	6.2
For projected needs, total		5.8		18.7
Upgraded facilities		1.0		8.2
New facilities for untreated wastes		4.3		10.2
New facilities for population increases		0.5		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,785		4,563	
Sewered	2,295		3,277	
Unsewered	490		1,286	
Projected needs, total (population, thousands)		865		1,485
Sewering unsewered urban population		490		1,285
Increases in urban population		375		200
[illegible]		115.5		200.5
Sewering unsewered urban population		65.5		173.5
Increases in urban population		50.0		27.0

Summary of Requirements and Outlays	Michigan		Minnesota	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	6,377		2,370	
With adequate treatment	1,340		769	
Less than adequate treatment	4,223		1,324	
No treatment	814		277	
Projected needs, total (population, thousands)		5,540		1,871
Upgrading of treatment		4,223		1,324
Constructing facilities for untreated wastes		814		277
Increases in urban population		503		270
Investment and capital outlays needed (mil. dol.)				
Investment, total	258.6		122.2	
Adequate treatment	89.8		73.3	
Less than adequate treatment	168.8		48.9	
[illegible]		535.8		172.4
Upgrading less than adequate facilities		223.0		64.5
Constructing facilities for untreated wastes		144.5		32.5
Increases, population and industry[4]		103.5		49.5
Allowances for depreciation		64.8		25.9
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	7.2	62.0	4.2	28.2
For adequate treatment facilities	3.6	53.0	2.7	24.4
For less than adequate facilities	3.6	9.0	1.5	3.8
For projected needs, total		35.0		10.9
Upgraded facilities		25.9		8.1
New facilities for untreated wastes		8.5		2.5
New facilities for population increases		0.6		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	6,377		2,370	
Sewered	5,568		2,114	
Unsewered	809		256	
Projected needs, total (population, thousands)		1,315		525
Sewering unsewered urban population		810		255
Increases in urban population		505		270
[illegible]		192.0		75.0
Sewering unsewered urban population		118.5		36.5
Increases in urban population		73.5		38.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1968 - 1973

Summary of Requirements and Outlays	Mississippi		Missouri [1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	988		3,141	
With adequate treatment	460		2,522	
Less than adequate treatment	23		183	
No treatment	505		436	
Projected needs, total (population, thousands)		711		885
Upgrading of treatment		23		183
Constructing facilities for untreated wastes		505		436
Increases in urban population		183		266
Investment and capital outlays needed (mil. dol.):				
Investment, total	17.6		55.9	
Adequate treatment	14.2		47.4	
Less than adequate treatment	3.4		8.5	
Capital outlays needed, total (mil. dol.)		54.1		126.8
Upgrading less than adequate facilities		3.0		13.0
Constructing facilities for untreated wastes		24.0		45.4
Increases, population and industry [4]		22.0		50.5
Allowances for depreciation		5.1		17.9
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.) [5]	1.1	10.5	3.2	34.0
For adequate treatment facilities	0.9	8.2	0.6	21.0
For less than adequate facilities	0.2	2.3	2.6	13.0
For projected needs, total		3.7		8.3
Upgraded facilities		0.3		1.4
New facilities for untreated wastes		3.3		6.6
New facilities for population increases		0.1		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	988		3,141	
Sewered	629		1,221	
Unsewered	359		1,920	
Projected needs, total (population, thousands)		545		2,185
Sewering unsewered urban population		360		1,920
Increases in urban population		185		265
Capital outlays needed, total (mil. dol.)		41.5		293.0
Sewering unsewered urban population		27.5		257.5
Increases in urban population		14.0		35.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1968 - 1973

Summary of Requirements and Outlays	Montana		Nebraska[1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	379[3]		846[3]	
With adequate treatment	123		833	
Less than adequate treatment	263		100	
No treatment				
Projected needs, total (population, thousands)		306		185
Upgrading of treatment		263		100
Constructing facilities for untreated wastes				
Increases in urban population		43		85
Investment and capital outlays needed (mil. dol.)				
Investment, total	15.7		37.9	
Adequate treatment	3.4		25.6	
Less than adequate treatment	12.3		12.3	
Capital outlays needed, total (mil. dol.)		25.5		29.0
Upgrading less than adequate facilities		16.0		9.9
Constructing facilities for untreated wastes				
Increases, population and industry[4]		6.0		11.5
Allowances for depreciation		3.5		7.6
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance, total (mil. dol.)	0.8	4.3	2.2	9.4
For adequate treatment facilities	0.1	2.5	1.5	8.5
For less than adequate facilities	0.7	1.8	0.7	0.9
For projected needs, total		2.0		1.0
Upgraded facilities		2.0		1.0
New facilities for untreated wastes				
New facilities for population increases				
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	379[6]		846	
Sewered	389		793	
Unsewered			53	
Projected needs, total (population, thousands)		45		140
Sewering unsewered urban population				55
Increases in urban population		45		85
Capital outlays needed, total (mil. dol.)		5.5		17.5
Sewering unsewered urban population				7.0
Increases in urban population		5.5		10.5

236-857 O - 68 - 4

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Nevada		New Hampshire	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	376		414	
With adequate treatment	366		43	
Less than adequate treatment	6		102	
No treatment	4		269	
Projected needs, total (population, thousands)		118		410
Upgrading of treatment		6		102
Constructing facilities for untreated wastes		4		269
Increases in urban population		108		39
Investment and capital outlays needed (mil. dol.)				
Investment, total	19.8		9.4	
Adequate treatment	19.0		3.4	
Less than adequate treatment	0.8		6.0	
Capital outlays needed, total (mil. dol.)		18.1		32.6
Upgrading less than adequate facilities		1.0		7.5
Constructing facilities for untreated wastes		0.5		16.0
Increases, population and industry[4]		13.0		6.0
Allowances for depreciation		3.6		3.1
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	0.5	2.5	0.1	3.8
For adequate treatment facilities	0.5	2.5	0.1	3.0
For less than adequate facilities			0.3	0.8
For projected needs, total				2.5
Upgraded facilities				0.7
New facilities for untreated wastes				1.8
New facilities for population increases				
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	376[6]		414	
Sewered	377		316	
Unsewered			98	
Projected needs, total (population, thousands)		110		140
Sewering unsewered urban population				100
Increases in urban population		110		40
Capital outlays needed, total (mil. dol.)		16.0		19.0
Sewering unsewered urban population				13.5
Increases in urban population		16.0		5.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	New Jersey		New Mexico	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	6,444		764	
With adequate treatment	1,629		671	
Less than adequate treatment	3,179		5	
No treatment	1,636		88	
Projected needs, total (population, thousands)		5,495		261
Upgrading of treatment		3,179		5
Constructing facilities for untreated wastes		1,636		88
Increases in urban population		680		168
Investment and capital outlays needed (mil. dol.)				
Investment, total	262.2		42.4	
Adequate treatment	136.9		41.8	
Less than adequate treatment	125.3		0.6	
Capital outlays needed, total (mil. dol.)		505.0		37.6
Upgrading less than adequate facilities		167.0		1.0
Constructing facilities for untreated wastes		161.0		5.5
Increases, population and industry[4]		113.5		23.5
Allowances for depreciation		63.5		7.6
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	7.3	60.9	1.1	6.4
For adequate treatment facilities	3.8	52.1	1.1	6.4
For less than adequate facilities	3.5	8.8		
For projected needs, total		33.1		0.8
Upgraded facilities		19.2		
New facilities for untreated wastes		13.1		0.6
New facilities for population increases		0.8		0.2
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	6,444		764	
Sewered	4,807		675	
Unsewered	1,637		89	
Projected needs, total (population, thousands)		2,315		260
Sewering unsewered urban population		1,635		90
Increases in urban population		680		170
Capital outlays needed, total (mil. dol.)		386.5		33.0
Sewering unsewered urban population		273.0		11.5
Increases in urban population		113.5		21.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	New York		North Carolina	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	16,003		2,138	
With adequate treatment	8,017		1,447	
Less than adequate treatment	3,733		125	
No treatment	4,253		566	
Projected needs, total (population, thousands)		9,005		996
Upgrading of treatment		3,733		125
Constructing facilities for untreated wastes		4,253		566
Increases in urban population		1,019		305
Investment and capital outlays needed (mil. dol.)				
Investment, total	372.1		115.4	
Adequate treatment	164.4		102.2	
Less than adequate treatment	207.7		13.2	
Capital outlays needed, total (mil. dol.)		963.6		95.6
Upgrading less than adequate facilities		266.0		16.0
Constructing facilities for untreated wastes		390.5		22.5
Increases, population and industry [1]		204.0		36.0
Allowances for depreciation		103.1		21.1
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[6]	20.2	143.8	4.4	25.1
For adequate treatment facilities	13.7	128.1	3.6	23.1
For less than adequate facilities	6.5	15.7	0.8	2.0
For projected needs, total		59.6		5.1
Upgraded facilities		25.6		1.5
New facilities for untreated wastes		32.5		3.3
New facilities for population increases		1.5		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	16,003		2,138	
Sewered	13,209		1,787	
Unsewered	2,794		351	
Projected needs, total (population, thousands)		3,815		655
Sewering unsewered urban population		2,795		350
Increases in urban population		1,020		305
Capital outlays needed, total (mil. dol.)		637.0		76.0
Sewering unsewered urban population		466.5		40.5
Increases in urban population		170.5		35.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1968 - 1973

Summary of Requirements and Outlays	N. Dakota		Ohio	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	254[3]		7,870	
With adequate treatment	278		4,591	
Less than adequate treatment	15		2,071	
No treatment			1,208	
Projected needs, total (population, thousands)		51		3,941
Upgrading of treatment		15		2,071
Constructing facilities for untreated wastes				1,208
Increases in urban population		36		662
Investment and capital outlays needed (mil. dol.)				
Investment, total	11.9		355.6	
Adequate treatment	9.8		260.9	
Less than adequate treatment	2.1		94.7	
Capital outlays needed, total (mil. dol.)		11.3		461.7
Upgrading less than adequate facilities		2.5		122.0
Constructing facilities for untreated wastes		4.0		134.5
Increases, population and industry[4]		2.5		131.5
Allowances for depreciation		2.3		73.7
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	0.4	2.1	13.3	84.2
For adequate treatment facilities	0.2	1.6	10.0	76.0
For less than adequate facilities	0.2	0.5	3.3	8.2
For projected needs, total		0.6		26.0
Upgraded facilities		0.1		14.0
New facilities for untreated wastes		0.5		11.0
New facilities for population increases				1.0
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	254[6]		7,870	
Sewered	343		6,674	
Unsewered			1,196	
Projected needs, total (population, thousands)		35		1,855
Sewering unsewered urban population				1,195
Increases in urban population		35		660
Capital outlays needed, total (mil. dol.)		5.0		247.0
Sewering unsewered urban population				159.0
Increases in urban population		5.0		88.0

Summary of Requirements and Outlays	Oklahoma		Oregon	
	1968	1969–1973	1968	1969–1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	1,694		1,320	
With adequate treatment	1,332		552	
Less than adequate treatment	199		504	
No treatment	163		264	
Projected needs, total (population, thousands)		592		956
Upgrading of treatment		199		504
Constructing facilities for untreated wastes		163		264
Increases in urban population		230		188
Investment and capital outlays needed (mil. dol.)				
Investment, total	89.9		59.2	
Adequate treatment	83.1		36.7	
Less than adequate treatment	6.8		22.5	
[illegible]		57.4		130.2
Upgrading less than adequate facilities		10.5		29.5
Constructing facilities for untreated wastes		6.0		41.5
Increases, population and industry[4]		25.5		44.0
Allowances for depreciation		15.4		15.2
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	3.1	17.2	2.6	16.9
For adequate treatment facilities	2.7	16.2	1.7	14.7
For less than adequate facilities	0.4	1.0	0.9	2.2
For projected needs, total		2.7		6.2
Upgraded facilities		1.5		2.1
New facilities for untreated wastes		0.9		2.8
New facilities for population increases		0.3		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	1,694		1,320	
Sewered	1,538		1,080	
Unsewered	156		240	
Projected needs, total (population, thousands)		385		430
Sewering unsewered urban population		155		240
Increases in urban population		230		190
[illegible]		42.5		67.0
Sewering unsewered urban population		17.0		37.5
Increases in urban population		25.5		29.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Pennsylvania		Rhode Island	
	1968	1969–1973	1968	1969–1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	8,428		793	
With adequate treatment	5,325		395	
Less than adequate treatment	2,916		190	
No treatment	187		208	
Projected needs, total (population, thousands)		3,424		440
Upgrading of treatment		2,916		190
Constructing facilities for untreated wastes		187		208
Increases in urban population		321		42
Investment and capital outlays needed (mil. dol.)				
Investment, total	451.9		26.6	
Adequate treatment	318.3		19.8	
Less than adequate treatment	133.6		6.8	
[illegible] (mil. dol.)		310.9		38.3
Upgrading less than adequate facilities		149.5		9.5
Constructing facilities for untreated wastes		27.5		17.5
Increases, population and industry[4]		53.5		5.5
Allowances for depreciation		80.4		5.8
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible] (mil. dol.)	12.3	73.3	1.2	7.9
For adequate treatment facilities	8.9	65.1	0.9	7.1
For less than adequate facilities	3.4	8.2	0.3	0.8
For projected needs, total		20.6		2.6
Upgraded facilities		18.1		1.0
New facilities for untreated wastes		2.0		1.6
New facilities for population increases		0.5		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	8,428[6]		793	
Sewered	9,086		586	
Unsewered			207	
Projected needs, total (population, thousands)		320		245
Sewering unsewered urban population				205
Increases in urban population		320		40
[illegible]		46.0		33.0
Sewering unsewered urban population				27.5
Increases in urban population		46.0		5.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1968 - 1973

Summary of Requirements and Outlays	S. Carolina		S. Dakota	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	1,134		287[3]	
With adequate treatment	540		290	
Less than adequate treatment	178		39	
No treatment	416			
Projected needs, total (population, thousands)		733		66
Upgrading of treatment		178		39
Constructing facilities for untreated wastes		416		
Increases in urban population		139		27
Investment and capital outlays needed (mil. dol.)				
Investment, total	54.3		20.0	
Adequate treatment	38.7		16.0	
Less than adequate treatment	15.6		4.0	
Capital outlays needed, total (mil. dol.)		93.9		12.5
Upgrading less than adequate facilities		19.0		5.0
Constructing facilities for untreated wastes		35.5		
Increases, population and industry[4]		27.0		4.0
Allowances for depreciation		12.4		3.5
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)	2.0	13.3	0.9	4.3
For adequate treatment facilities	1.2	11.3	0.7	3.8
For less than adequate facilities	0.8	2.0	0.2	0.5
For projected needs, total		5.3		0.3
Upgraded facilities		1.7		0.3
New facilities for untreated wastes		3.4		
New facilities for population increases		0.2		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	1,134		287[6]	
Sewered	976		344	
Unsewered	158			
Projected needs, total (population, thousands)		300		25
Sewering unsewered urban population		160		
Increases in urban population		140		25
Capital outlays needed, total (mil. dol.)		34.5		4.0
Sewering unsewered urban population		18.5		
Increases in urban population		16.0		4.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Tennessee		Texas	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,214		8,874	
With adequate treatment	750		6,819	
Less than adequate treatment	319		130	
No treatment	1,145		1,925	
Projected needs, total (population, thousands)		1,779		3,578
Upgrading of treatment		319		130
Constructing facilities for untreated wastes		1,145		1,925
Increases in urban population		315		1,523
Investment and capital outlays needed (mil. dol.)				
Investment, total	58.2		387.8	
Adequate treatment	42.9		373.5	
Less than adequate treatment	15.3		14.3	
Capital outlays needed, total (mil. dol.)		147.8		323.6
Upgrading less than adequate facilities		19.5		17.0
Constructing facilities for untreated wastes		68.0		81.0
Increases, population and industry[4]		43.5		155.5
Allowances for depreciation		16.8		70.1
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[5]	2.5	21.7	11.2	72.2
For adequate treatment facilities	1.9	20.2	10.5	70.4
For less than adequate facilities	0.6	1.5	0.7	1.8
For projected needs, total		10.7		17.9
Upgraded facilities		2.3		1.5
New facilities for untreated wastes		8.1		14.5
New facilities for population increases		0.3		1.9
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,214		8,874	
Sewered	1,667		6,953	
Unsewered	547		1,921	
Projected needs, total (population, thousands)		860		3,445
Sewering unsewered urban population		545		1,920
Increases in urban population		315		1,525
Capital outlays needed, total (mil. dol.)		66.5		378.5
Sewering unsewered urban population		42.0		211.0
Increases in urban population		24.5		167.5

Summary of Requirements and Outlays	Utah		Vermont	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	825		162	
With adequate treatment	500		9	
Less than adequate treatment	19		121	
No treatment	306		32	
Projected needs, total (population, thousands)		469		166
Upgrading of treatment		19		121
Constructing facilities for untreated wastes		306		32
Increases in urban population		144		13
Investment and capital outlays needed (mil. dol.)				
Investment, total	31.9		8.6	
Adequate treatment	29.9		0.6	
Less than adequate treatment	2.0		8.0	
[illegible]		127.4		17.7
Upgrading less than adequate facilities		2.0		10.0
Constructing facilities for untreated wastes		88.0		3.0
Increases, population and industry[4]		26.0		2.5
Allowances for depreciation		11.4		2.2
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	1.2	8.9	0.5	2.5
For adequate treatment facilities	1.1	8.6		1.2
For less than adequate facilities	0.1	0.3	0.5	1.3
For projected needs, total		3.1		1.2
Upgraded facilities		0.2		0.9
New facilities for untreated wastes		2.7		0.3
New facilities for population increases		0.2		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	825		162	
Sewered	568		160	
Unsewered	257		2	
Projected needs, total (population, thousands)		400		15
Sewering unsewered urban population		255		
Increases in urban population		145		15
[illegible]		51.0		2.0
Sewering unsewered urban population		32.5		
Increases in urban population		18.5		2.0

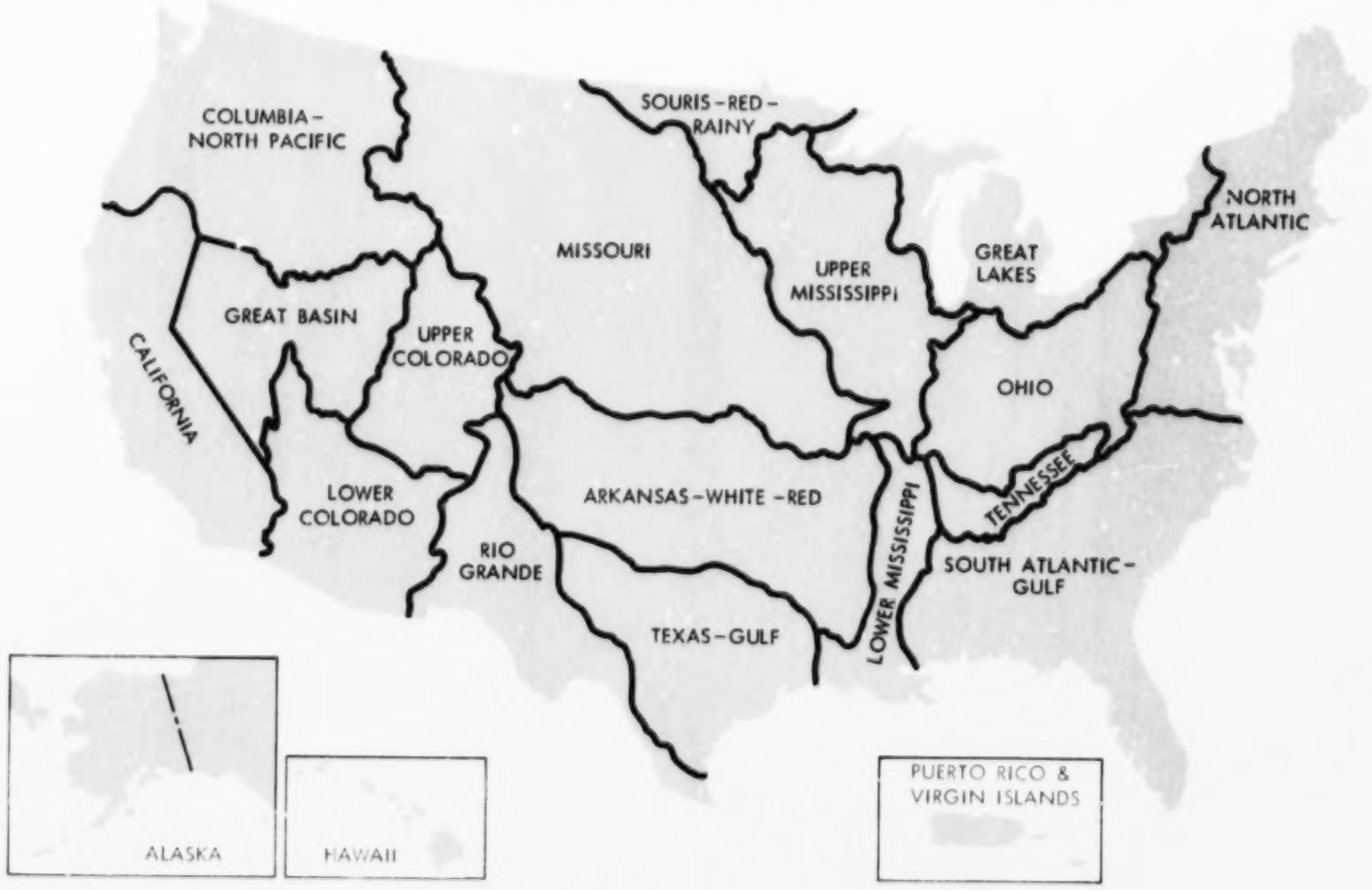
Summary of Requirements and Outlays	Virginia[2]		Washington[1]	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	2,756		2,139	
With adequate treatment	1,092		681	
Less than adequate treatment	1,328		444	
No treatment	336		1,014	
Projected needs, total (population, thousands)		2,130		1,661
Upgrading of treatment		1,328		444
Constructing facilities for untreated wastes		336		1,014
Increases in urban population		466		203
Investment and capital outlays needed (mil. dol.)				
Investment, total	97.7		70.4	
Adequate treatment	48.3		37.0	
Less than adequate treatment	49.4		33.4	
[redacted]		194.7		155.3
Upgrading less than adequate facilities		65.0		33.0
Constructing facilities for untreated wastes		47.0		84.5
Increases, population and industry[4]		59.0		19.0
Allowances for depreciation		23.7		18.8
Summary of Treatment Works Operation and Maintenance Costs:				
[redacted]	3.3	25.2	3.0	22.8
For adequate treatment facilities	1.6	20.9	1.3	18.5
For less than adequate facilities	1.7	4.3	1.7	4.3
For projected needs, total		12.9		12.0
Upgraded facilities		8.3		4.0
New facilities for untreated wastes		4.0		7.7
New facilities for population increases		0.6		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	2,756		2,139	
Sewered	2,400		1,155	
Unsewered	356		984	
Projected needs, total (population, thousands)		820		1,190
Sewering unsewered urban population		355		985
Increases in urban population		465		205
[redacted]		110.0		186.5
Sewering unsewered urban population		47.5		154.5
Increases in urban population		62.5		32.0

Summary of Requirements and Outlays	West Virginia		Wisconsin	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	710		2,804	
With adequate treatment	149		2,049	
Less than adequate treatment	348		689	
No treatment	213		66	
Projected needs, total (population, thousands)		590		1,037
Upgrading of treatment		348		689
Constructing facilities for untreated wastes		213		66
Increases in urban population		29		282
Investment and capital outlays needed (mil. dol.)				
Investment, total	25.3		169.7	
Adequate treatment	5.3		132.8	
Less than adequate treatment	20.0		36.9	
[illegible]		50.4		122.4
Upgrading less than adequate facilities		25.9		47.0
Constructing facilities for untreated wastes		13.5		3.5
Increases, population and industry[4]		5.5		42.0
Allowances for depreciation		6.4		29.9
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	1.4	8.5	7.2	36.5
For adequate treatment facilities	0.4	6.0	5.2	31.5
For less than adequate facilities	1.0	2.5	2.0	5.0
For projected needs, total		4.0		5.5
Upgraded facilities		2.5		4.9
New facilities for untreated wastes		1.5		0.3
New facilities for population increases				0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	710		2,804	
Sewered	641		2,738	
Unsewered	69		66	
Projected needs, total (population, thousands)		100		345
Sewering unsewered urban population		70		65
Increases in urban population		30		280
[illegible]		13.5		45.0
Sewering unsewered urban population		9.5		8.5
Increases in urban population		4.0		36.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	Wyoming [1]	
	1968	1969-1973
Summary of Need for Municipal Treatment Works:		
Urban population of area (thousands)	198[3]	
With adequate treatment	189	
Less than adequate treatment	29	
No treatment		
Projected needs, total (population, thousands)		51
Upgrading of treatment		29
Constructing facilities for untreated wastes		
Increases in urban population		22
Investment and capital outlays needed (mil. dol.)		
Investment, total	8.2	
Adequate treatment	4.7	
Less than adequate treatment	3.5	
Capital outlays needed, total (mil. dol.)		9.0
Upgrading less than adequate facilities		2.3
Constructing facilities for untreated wastes		0.5
Increases, population and industry [4]		4.5
Allowances for depreciation		1.7
Summary of Treatment Works Operation and Maintenance Costs:		
Operation and maintenance costs, total (mil. dol.)[5]	0.4	2.0
For adequate treatment facilities	0.2	1.5
For less than adequate facilities	0.2	0.5
For projected needs, total		0.5
Upgraded facilities		0.5
New facilities for untreated wastes		
New facilities for population increases		
Summary of Need for Sanitary Sewers:		
Urban population, total (thousands)	198[6]	
Sewered	219	
Unsewered		
Projected needs, total (population, thousands)		35
Sewering unsewered urban population		
Increases in urban population		35
Capital outlays needed, total (mil. dol.)		4.5
Sewering unsewered urban population		
Increases in urban population		4.5

FIGURE 1-2
WATER RESOURCE REGIONS
PROPOSED BY WATER RESOURCE COUNCIL FOR TYPE I COMPREHENSIVE SURVEYS



Summary of Requirements and Outlays	Alaska		Arkansas - White - Red	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	121		5,064	
With adequate treatment	19		3,550	
Less than adequate treatment			702	
No treatment	102		812	
Projected needs, total (population, thousands)		133		2,243
Upgrading of treatment				702
Constructing facilities for untreated wastes		102		812
Increases in urban population		31		729
Investment and capital outlays needed (mil. dol.)				
Investment, total	1.0		228.3	
Adequate treatment	1.0		196.2	
Less than adequate treatment			32.1	
[illegible]		12.8		216.3
Upgrading less than adequate facilities				41.9
Constructing facilities for untreated wastes		7.0		39.4
Increases, population and industry		5.0		92.2
Allowances for depreciation		0.8		43.0
Summary of Treatment Works Operation and Maintenance Costs:				
[illegible]	1.8	9.5	8.8	51.1
For adequate treatment facilities	1.7	9.2	7.0	46.2
For less than adequate facilities	0.1	0.3	1.8	4.9
For projected needs, total		9.7		10.9
Upgraded facilities		9.7		4.9
New facilities for untreated wastes				5.1
New facilities for population increases				0.9
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	121		5,064 [5]	
Sewered	103		4,461	
Unsewered	18		668	
Projected needs, total (population, thousands)		48		1,397
Sewering unsewered urban population		18		668
Increases in urban population		30		729
[illegible]		8.0		164.2
Sewering unsewered urban population		3.0		79.7
Increases in urban population		5.0		84.5

See footnotes at end of tables.

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	California		Columbia-North Pacific	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	17,677		3,909	
With adequate treatment	12,779		1,426	
Less than adequate treatment	44		1,158	
No treatment	4,854		1,325	
Projected needs, total (population, thousands)		7,368		2,920
Upgrading of treatment		44		1,158
Constructing facilities for untreated wastes		4,854		1,325
Increases in urban population		3,070		437
Investment and capital outlays needed (mil. dol.)				
Investment, total	604.5		149.2	
Adequate treatment	602.6		81.4	
Less than adequate treatment	1.9		67.8	
Capital outlays needed, total (mil. dol.)		647.8		314.4
Upgrading less than adequate facilities		2.6		77.6
Constructing facilities for untreated wastes		371.7		127.7
Increases, population and industry[3]		151.4		70.7
Allowances for depreciation		122.5		38.4
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	11.3	99.8	6.9	46.4
For adequate treatment facilities	6.1	80.5	3.5	38.0
For less than adequate facilities	5.2	19.3	3.4	8.4
For projected needs, total		49.7		20.0
Upgraded facilities		27.3		8.7
New facilities for untreated wastes		18.4		10.7
New facilities for population increases		4.0		0.6
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	17,677		3,909	
Sewered	12,852		2,654	
Unsewered	4,825		1,255	
Projected needs, total (population, thousands)		7,894		1,697
Sewering unsewered urban population		4,825		1,255
Increases in urban population		3,069		442
Capital outlays needed, total (mil. dol.)		1,175.8		263.1
Sewering unsewered urban population		718.7		195.7
Increases in urban population		457.1		67.4

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	Great Basin		Great Lakes	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	904		15,953	
With adequate treatment	606		7,137	
Less than adequate treatment	21		6,612	
No treatment	277		2,204	
Projected needs, total (population, thousands)		474		10,097
Upgrading of treatment		21		6,612
Constructing facilities for untreated wastes		277		2,204
Increases in urban population		176		1,281
Investment and capital outlays needed (mil. dol.)				
Investment, total	37.1		680.1	
Adequate treatment	35.0		391.7	
Less than adequate treatment	2.1		288.4	
Capital outlays needed, total (mil. dol.)		122.4		1,059.2
Upgrading less than adequate facilities		2.3		376.3
Constructing facilities for untreated wastes		79.4		285.7
Increases, population and industry[3]		28.9		246.0
Allowances for depreciation		11.8		151.2
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	1.3	9.1	24.7	165.0
For adequate treatment facilities	1.3	8.8	16.6	144.9
For less than adequate facilities		0.3	8.1	20.1
For projected needs, total		2.8		60.7
Upgraded facilities		0.2		39.2
New facilities for untreated wastes		2.4		19.9
New facilities for population increases		0.2		1.6
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	904		15,953	
Sewered	674		14,036[5]	
Unsewered	230		1,937	
Projected needs, total (population, thousands)		407		3,219
Sewering unsewered urban population		230		1,937
Increases in urban population		177		1,282
Capital outlays needed, total (mil. dol.)		52.7		464.1
Sewering unsewered urban population		29.2		282.5
Increases in urban population		23.5		181.6

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	Hawaii		Lower Colorado	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	591		1,685	
With adequate treatment	162		964	
Less than adequate treatment			38	
No treatment	429		683	
Projected needs, total (population, thousands)		504		1,203
Upgrading of treatment				38
Constructing facilities for untreated wastes		429		683
Increases in urban population		75		482
Investment and capital outlays needed (mil. dol.)				
Investment, total	9.6		61.6	
Adequate treatment	9.6		57.7	
Less than adequate treatment			3.9	
Capital outlays needed, total (mil. dol.)		35.5		100.8
Upgrading less than adequate facilities				4.7
Constructing facilities for untreated wastes		27.5		29.5
Increases, population and industry[3]		4.5		53.3
Allowances for depreciation		3.5		13.3
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	0.5	4.6	1.1	10.7
For adequate treatment facilities	0.3	3.6	1.0	10.2
For less than adequate facilities	0.2	1.0	0.1	0.5
For projected needs, total		1.9		4.9
Upgraded facilities				0.3
New facilities for untreated wastes		1.9		4.1
New facilities for population increases				0.5
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	591		1,685	
Sewered	166		1,032	
Unsewered	425		653	
Projected needs, total (population, thousands)		500		1,138
Sewering unsewered urban population		425		653
Increases in urban population		75		485
Capital outlays needed, total (mil. dol.)		73.0		145.8
Sewering unsewered urban population		62.0		83.1
Increases in urban population		11.0		62.7

Summary of Requirements and Outlays	Lower Mississippi		Missouri	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)				
With adequate treatment	3,154		5,265[2]	
Less than adequate treatment	1,081		3,334	
No treatment	544		1,036	
Projected needs, total (population, thousands)	1,529		1,071	
Upgrading of treatment		2,553		2,707
Constructing facilities for untreated wastes		544		1,036
Increases in urban population		1,529		1,071
Investment and capital outlays needed (mil. dol.)		480		600
Investment, total				
Adequate treatment	77.1		200.0	
Less than adequate treatment	57.7		144.5	
	19.4		55.5	
		219.1		234.0
Upgrading less than adequate facilities		25.4		61.5
Constructing facilities for untreated wastes		97.7		38.0
Increases, population and industry[3]		73.7		91.8
Allowances for depreciation		22.3		42.7
Summary of Treatment Works Operation and Maintenance Costs:				
	3.6	31.5	9.7	58.8
For adequate treatment facilities	2.6	28.8	6.2	46.9
For less than adequate facilities	1.0	2.7	3.5	11.9
For projected needs, total		15.0		12.2
Upgraded facilities		3.6		7.4
New facilities for untreated wastes		10.8		4.5
New facilities for population increases		0.6		0.3
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	3,154		5,265[5]	
Sewered	2,207		4,396	
Unsewered	947		1,061	
Projected needs, total (population, thousands)		1,428		1,671
Sewering unsewered urban population		947		1,061
Increases in urban population		481		610
		155.8		220.3
Sewering unsewered urban population		103.9		141.3
Increases in urban population		51.9		79.0

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	North Atlantic		Ohio	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	41,154		12,051	
With adequate treatment	20,101		6,782	
Less than adequate treatment	12,947		3,540	
No treatment	8,106		1,729	
Projected needs, total (population, thousands)		24,239		6,227
Upgrading of treatment		12,947		3,540
Constructing facilities for untreated wastes		8,106		1,729
Increases in urban population		3,186		958
Investment and capital outlays needed (mil. dol.)				
Investment, total	1,431.5		567.2	
Adequate treatment	769.0		403.0	
Less than adequate treatment	662.5		164.2	
Capital outlays needed, total (mil. dol.)		2,392.2		674.6
Upgrading less than adequate facilities		746.6		205.8
Constructing facilities for untreated wastes		801.6		172.3
Increases, population and industry[3]		512.1		180.7
Allowances for depreciation		331.9		115.8
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	51.2	382.2	21.4	132.7
For adequate treatment facilities	31.9	332.7	15.8	118.4
For less than adequate facilities	19.3	49.5	5.6	14.3
For projected needs, total		158.9		39.8
Upgraded facilities		81.6		23.7
New facilities for untreated wastes		73.1		14.9
New facilities for population increases		4.2		1.2
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	41,154[5]		12,051[5]	
Sewered	34,394		10,957	
Unsewered	7,225		1,276	
Projected needs, total (population, thousands)		1 158		2,231
Sewering unsewered urban population		7,225		1,276
Increases in urban population		3,233		955
Capital outlays needed, total (mil. dol.)		1,632.9		281.2
Sewering unsewered urban population		1,101.2		159.7
Increases in urban population		531.7		121.5

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	Rio Grande		Souris-Red-Rainy	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	1,434		174[2]	
With adequate treatment	1,166		154	
Less than adequate treatment	22		34	
No treatment	246			
Projected needs, total (population, thousands)		543		58
Upgrading of treatment		22		34
Constructing facilities for untreated wastes		246		
Increases in urban population		275		24
Investment and capital outlays needed (mil. dol.)				
Investment, total	69.3		8.4	
Adequate treatment	67.6		6.4	
Less than adequate treatment	1.7		2.0	
Capital outlays needed, total (mil. dol.)		60.5		9.0
Upgrading less than adequate facilities		2.6		2.5
Constructing facilities for untreated wastes		11.9		2.6
Increases, population and industry[3]		33.4		2.6
Allowances for depreciation		12.6		2.2
				1.7
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	1.9	11.7	0.2	2.3
For adequate treatment facilities	1.9	11.5	0.1	1.9
For less than adequate facilities		0.2	0.1	0.4
For projected needs, total		2.2		0.3
Upgraded facilities		0.1		
New facilities for untreated wastes		1.7		0.3
New facilities for population increases		0.4		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	1,434		174[5]	
Sewered	1,187		214	
Unsewered	247			
Projected needs, total (population, thousands)		525		23
Sewering unsewered urban population		247		
Increases in urban population		278		23
Capital outlays needed, total (mil. dol.)		61.3		4.0
Sewering unsewered urban population		28.5		0.7
Increases in urban population		32.8		3.3

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973

Summary of Requirements and Outlays	South Atlantic-Gulf		Tennessee	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	13,747		945	
With adequate treatment	5,948		362	
Less than adequate treatment	2,931		145	
No treatment	4,868		438	
Projected needs, total (population, thousands)		10,213		719
Upgrading of treatment		2,931		145
Constructing facilities for untreated wastes		4,868		438
Increases in urban population		2,414		136
Investment and capital outlays needed (mil. dol.)				
Investment, total	522.5		28.7	
Adequate treatment	385.5		21.7	
Less than adequate treatment	137.0		7.0	
Capital outlays needed, total (mil. dol.)		**921.9**		**60.1**
Upgrading less than adequate facilities		172.5		8.9
Constructing facilities for untreated wastes		367.7		25.5
Increases, population and industry [3]		259.3		18.3
Allowances for depreciation		122.4		7.4
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	**19.9**	**147.3**	**1.2**	**9.6**
For adequate treatment facilities	13.5	129.9	0.8	9.0
For less than adequate facilities	6.4	17.4	0.4	0.6
For projected needs, total		59.7		4.3
Upgraded facilities		17.7		1.1
New facilities for untreated wastes		38.2		3.1
New facilities for population increases		3.8		0.1
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	13,747		945	
Sewered	9,900		723	
Unsewered	3,847		222	
Projected needs, total (population, thousands)		6,265		359
Sewering unsewered urban population		3,847		222
Increases in urban population		2,418		137
Capital outlays needed, total (mil. dol.)		**680.9**		**29.0**
Sewering unsewered urban population		418.1		17.8
Increases in urban population		262.8		11.2

POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	Texas-Gulf		Upper Colorado	
	1968	1969-1973	1968	1969-1973
Summary of Need for Municipal Treatment Works:				
Urban population of area (thousands)	7,627		165	
With adequate treatment	5,870		113	
Less than adequate treatment	111		28	
No treatment	1,646		24	
Projected needs, total (population, thousands)		3,070		81
Upgrading of treatment		111		28
Constructing facilities for untreated wastes		1,646		24
Increases in urban population		1,313		29
Investment and capital outlays needed (mil. dol.)				
Investment, total	333.4		7.0	
Adequate treatment	321.3		5.8	
Less than adequate treatment	12.1		1.2	
Capital outlays needed, total (mil. dol.)		279.3		13.8
Upgrading less than adequate facilities		14.6		1.3
Constructing facilities for untreated wastes		69.5		6.2
Increases, population and industry[3]		134.8		4.6
Allowances for depreciation		60.4		1.7
Summary of Treatment Works Operation and Maintenance Costs:				
Operation and maintenance costs, total (mil. dol.)[4]	9.6	62.0	0.1	1.6
For adequate treatment facilities	9.0	60.5	0.1	1.4
For less than adequate facilities	0.6	1.5		0.2
For projected needs, total		15.2		0.1
Upgraded facilities		1.3		
New facilities for untreated wastes		12.3		0.1
New facilities for population increases		1.6		
Summary of Need for Sanitary Sewers:				
Urban population, total (thousands)	7,627		165[5]	
Sewered	5,985		145	
Unsewered	1,642		24	
Projected needs, total (population, thousands)		2,957		55
Sewering unsewered urban population		1,642		24
Increases in urban population		1,315		31
Capital outlays needed, total (mil. dol.)		325.4		6.9
Sewering unsewered urban population		180.7		3.0
Increases in urban population		144.7		3.9

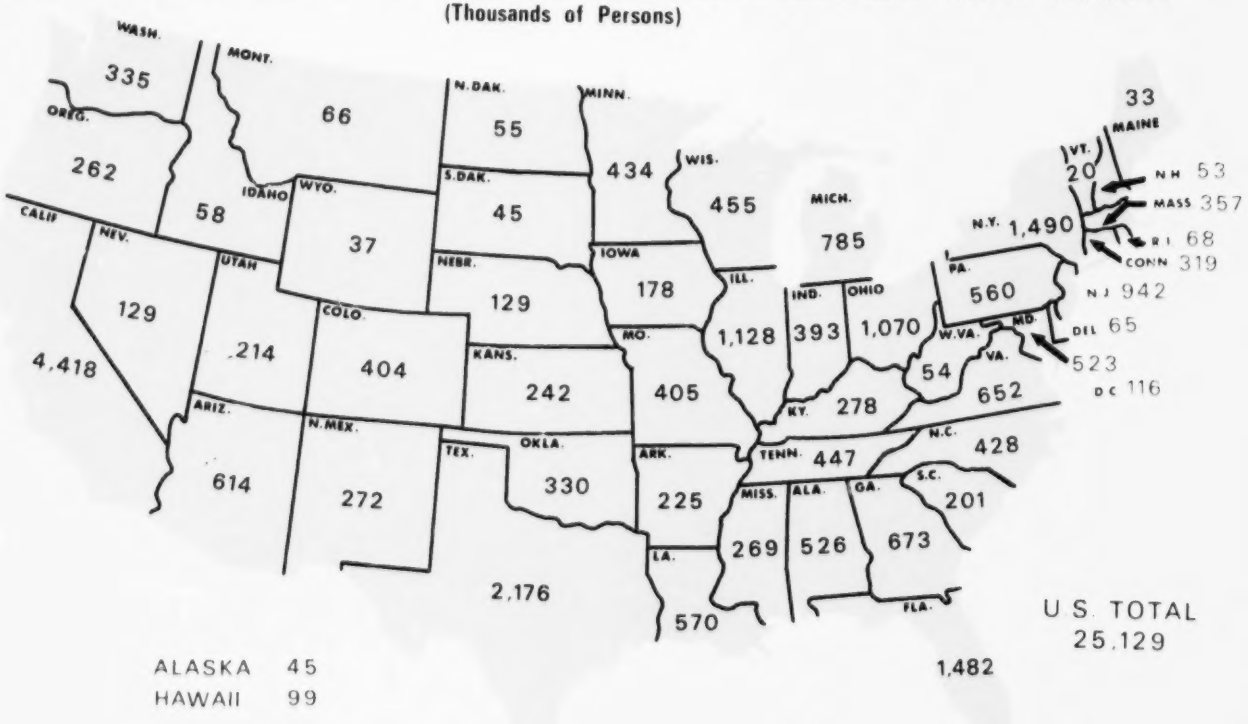
POPULATION SERVED BY EXISTING MUNICIPAL FACILITIES AND ESTIMATED REQUIREMENTS PROJECTED FOR FISCAL YEARS 1969 - 1973[1]

Summary of Requirements and Outlays	Upper Mississippi	
	1968	1969-1973
Summary of Need for Municipal Treatment Works:		
Urban population of area (thousands)	13,982[2]	
With adequate treatment	10,149	
Less than adequate treatment	1,952	
No treatment	1,950	
Projected needs, total (population, thousands)		5,126
Upgrading of treatment		1,952
Constructing facilities for untreated wastes		1,950
Increases in urban population		1,224
Investment and capital outlays needed (mil. dol.)		
Investment, total	698.3	
Adequate treatment	590.5	
Less than adequate treatment	107.8	
Capital outlays needed, total (mil. dol.)		620.1
Upgrading less than adequate facilities		121.6
Constructing facilities for untreated wastes		146.9
Increases, population and industry[3]		219.6
Allowances for depreciation		132.0
Summary of Treatment Works Operation and Maintenance Costs:		
Operation and maintenance costs, total (mil. dol.)[4]	26.3	154.1
For adequate treatment facilities	21.2	136.6
For less than adequate facilities	5.1	17.5
For projected needs, total		26.7
Upgraded facilities		12.0
New facilities for untreated wastes		13.3
New facilities for population increases		1.4
Summary of Need for Sanitary Sewers:		
Urban population, total (thousands)	13,982[5]	
Sewered	12,134	
Unsewered	1,938	
Projected needs, total (population, thousands)		3,128
Sewering unsewered urban population		1,938
Increases in urban population		1,190
Capital outlays needed, total (mil. dol.)		416.1
Sewering unsewered urban population		258.2
Increases in urban population		157.9

Appendix I

ESTIMATED INCREASES IN URBAN POPULATION, 1973-1978, USED TO CALCULATE EXCESS CAPACITY [1]

(Thousands of Persons)



[1] Estimated construction costs for waste treatment facilities shown in individual State and Regional tables include cost of additional capacity for five years of population growth beyond the 1969-1973 period of the cost estimate of needs. Estimates of urban population growth for the 1969-1973 period are contained in the State and Regional tables.

Footnotes for States

[1]Water quality standards adopted call for primary waste treatment in some urban areas of State. Standards adopted for other States call for at least secondary waste treatment.

[2]Capital outlays shown for construction of treatment works to serve population in Virginia may actually occur in the District of Columbia with service provided to the Virginia population under contract.

[3]Population served by treatment facilities exceeds total urban population of these States. Thus, detail adds to 259,000 more than the total U. S. urban population.

[4]Includes construction costs for additional capacity for five years of population growth in each State beyond the 1969-1973, period of the cost estimate of needs.

[5]Total O. & M. costs shown for the five-year period, 1969-1973, are for treatment works existing and needed.

[6]Population served by collection sewers exceeds total urban population of these States. Thus, the detail adds to 1,058,000 more than the total U. S. urban population.

Footnotes For Regions

[1]Water Resources Regions proposed by Water Resources Council for Type I Comprehensive Surveys. Data was not available to estimate capital outlays needed for the Puerto Rico-Virgin Islands Region.

[2]Population served by treatment facilities exceeds total urban population of one or more States of the Region. Thus, the detail adds to 259,000 more than the total U.S. urban population.

[3]Includes construction costs for additional capacity for five years of population growth in each Region beyond the 1969-1973 period of the cost estimate of needs.

[4]Total O. & M. costs shown for the five-year period, 1969-1973, are for existing and needed treatment works.

[5]Population served by collection sewers exceeds total urban population of one or more States of the Region. Thus, the detail adds to 1,058,000 more than the total U.S. urban population.

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